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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,516	12/03/2001	Masakazu Suzuki	826.1774	6506

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EXAMINER

CHEN, ALAN S

ART UNIT PAPER NUMBER

2182

DATE MAILED: 03/01/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

SDM

Office Action Summary

Application No.

09/998,516

Applicant(s)

SUZUKI ET AL.

Examiner

Alan S Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED FINAL ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 2 rejected under 35 USC 103(a) as being unpatentable over No. 5,442,305 to Martin et al. (hereafter Martin) in view of No. 6,496,900 to McDonald et al. (hereafter McDonald).

3. As per claim 1, Martin discloses a device driver apparatus (Fig. 1, element 100), which is connected to an initiator via a bus (Fig. 10), transmitting/receiving a signal (see Table 3 in Column 7 for SCSI pin/outs of apparatus connectors) to/from a process simulating an I/O device (Column 17, under section title "Entry into the Test Manager by Simulating a SCSI Device") comprising:

An adapter (Fig. 1, element 100 and Fig. 10) transmitting/receiving a command or data to/from the initiator (e.g., the device requesting use of the bus, which can be the unit under test or the device driver apparatus) via the bus (Fig. 10) using a SCSI protocol (Fig. 10, elements 1070, 1010, and 660); and

A driver (Fig. 14, elements 1401, 1404, and 1405 and Fig. 15), which is located in the memory of the base unit, between the adapter (Fig. 1, element 100 and Fig. 10) and a pseudo I/O process simulating the I/O device, notifying the pseudo I/O process of one or more of the commands, and also notifying said adapter of one or more of status and data from the PIO

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process. Note the adapter sits between the unit under test (UUT) and the device driver apparatus, so any status/command/data communication will be sensed by the adapter.

Martin does not disclose expressly performing a queuing process when receiving a plurality of commands from the PIO process.

McDonald discloses an apparatus that utilizes a command buffer that stores multiple command blocks, queued up so that a new command can be dispatched to be executed by an execution unit immediately upon the completion of the current command block in the buffer (Column 2, lines 5-12 and Column 4, lines 52-62).

Martin and McDonald are analogous art because they are from the same field of endeavor in computer architecture where there is the possibility of multiple continuous commands (See Table 4 of Martin).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use a command queue.

The suggestion/motivation for doing so would have been because of the multiple continuous commands possible in the PIO process where one unit sends several continuous commands to another, it would be advantageous to have a buffer/queue on the command execution side to queue up the commands instead of having to wait for the command transmission side to send the commands. This allows the commands to be processed immediately one after another, as cited by McDonald (Column 2, lines 5-12 and Column 4, lines 52-62).

Therefore, it would have been obvious to combine Martin with McDonald for the benefit of processing each command immediately, one after another without delay.

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4. As per claim 2, Martin combined with McDonald discloses claim 1, wherein Martin further discloses the device driver apparatus according to claim 1, wherein the predetermined protocol is a SCSI protocol (Fig. 10, elements 1070, 1010, and 660).

Response to Arguments

5. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

6. Claims 3-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is the statement of reasons for the indication of allowable subject matter: The prior art disclosed by the applicant and cited by the Examiner fail to teach or suggest, alone or in combination, the adapter storing a set of data that is received from the initiator by issuing a data request using the buffer address in the register, and notifies said driver that the set of data has been stored, whereby the driver notifies asynchronously the pseudo I/O process that the data has been received.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan S Chen whose telephone number is 703-605-0708. The examiner can normally be reached on M-F 8:30am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A Gaffin can be reached on 703-308-3301. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ASC
02/24/2004



**REHANA PERVEEN
PRIMARY EXAMINER**